

# Eaton Variable Frequency Drive Storage Requirements

## Introduction

The following specifies the requirements for variable frequency drives that are stored without power for longer than 12 months. Following these steps will prevent damage or decrease in quality due to corrosion, contamination, deterioration, or other physical damage.

## Requirements

The drive(s) should be stored indoors at a temperature between -40°F to 158°F (-40°C to +70°C) and the humidity should not exceed 95%, non-condensing. The unit shall be kept free of accumulated dust and debris, preferably in its original packaging. For climates with more extreme temperatures and/or higher humidity, environmental controls need to be implemented.

If the drives are stored for a period exceeding 12 months, the capacitors are to be reformed before full voltage is applied. The DC Bus capacitors have the following shelf life:

1. Capacitors stored less than one year will meet all initial parameters.
2. Capacitors that are stored over a year should be reformed.
3. Ten years is typically the end of the useful shelf life and therefore capacitors should be replaced.

## Reforming electrolytic capacitors with a VARIAC and a control transformer

Equipment needed:

- 250VA (minimum) 115V VARIAC
- 250VA (minimum) control transformer - primary taps should match VFD nominal voltage, secondary taps should be 115V
- Interconnecting wires

Procedure:

1. Hook up the 115V side of the CPT to the output of the VARIAC.
2. Wire the CPT to match the nominal voltage of the VFD. Hook the CPT up to 2 of the input phases on the drive (does not matter which phases, L1, L2, or L3).
3. Ensure a common ground between the drive and the power supply.
4. Make sure the VARIAC is set at 0 and then plug in the VARIAC. Turn on the VARIAC and slowly raise the voltage until the circuit boards power up, then stop raising the voltage. A safe pace is 10% of nominal voltage per minute.
5. On SVX and DG1 drives, the fan control setting should be set to "calc temp". This will turn the fans off until the drive reaches 40°C therefore, preventing the fans from running during this procedure.
  - a. On SVX drives, this parameter is P5.7.2.
  - b. On DG1 drives, this parameter is P21.1.14.
6. Let the drive sit at this level for about 10 minutes.
7. Turn up the input voltage slowly (again 10% of rated voltage per minute) to the rated voltage of the unit. Let the drive sit at this level for a minimum of 1 hour.
8. Turn the VARIAC off and let the drive discharge for at least 5 minutes. Disconnect all equipment.
9. Process is complete.

## Additional Help

In the US or Canada: please contact the Technical Resource Center at 1-877-ETN-CARE or 1-877-326-2273 option 2, option 6, option 3.

All other supporting documentation is located on the Eaton web site at [www.eaton.com/drives](http://www.eaton.com/drives)



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